

CLAIMS:

1. A resonant LLC power converter comprising at least two transformers, primary windings of the at least two transformers are coupled in series, each one of the at least two transformers has a secondary winding for supplying a non-zero current to a same load during a substantially same period of time.

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2. A resonant LLC power converter as claimed in claim 1, wherein the first transformer has a first predetermined number of further secondary windings for supplying a first total power to associated loads, the first total power being less than the power supplied by the second secondary winding.

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3. A resonant LLC power converter as claimed in claim 2, wherein the second transformer has a second predetermined number of further secondary windings for supplying a second total power to associated loads, wherein both the first total power minus the second total power is less than the power supplied by the first secondary winding, and the second total power minus the first total power is less than the power supplied by the second secondary winding.

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4. A resonant LLC power converter as claimed in claim 3, wherein at least one of the first predetermined number of further secondary windings and an associated rectifier is poled for delivering power to at least one of the associated loads, during a half wave of a resonance current in the first transformer with a first polarity, and at least one of the second predetermined number of further secondary windings and an associated rectifier is poled for supplying power to the at least one of the associated loads during a half wave of a resonant current in the second transformer with a polarity opposite to the first polarity.

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5. A resonant LLC power converter as claimed in claim 1, and comprising, a resonance capacitor, a series arrangement of a first electronic switch and a second electronic switch for receiving a direct current input voltage,

the at least two transformers comprising a first transformer having a first primary winding and a first secondary winding being coupled via a first rectifier circuit to a load for supplying current to the load during a conductive period of the first rectifier circuit,

a second transformer having a second primary winding and a second secondary winding being coupled via a second rectifier circuit to the load for supplying current to the load during a conductive period of the second rectifier,

wherein the first primary winding, the second primary winding and the resonance capacitor are arranged in series across the second electronic switch, and

the first primary winding and the second primary winding, and the first rectifier circuit and the second rectifier circuit being poled to obtain a substantially coincidence of the conductive period of the first rectifier circuit and the conductive period of the second rectifier circuit to obtain a first voltage across the first primary winding being substantially equal to a second voltage across the second primary winding during the conductive period of the first rectifier circuit.

6. An electronic apparatus comprising a resonant LLC power converter with at least two transformers, primary windings of the at least two transformers are coupled in series, each one of the at least two transformers has a secondary winding for supplying a non-zero current to a same load during a substantially same period of time.